

REMARKS

Claims 1-14, 16 and 18 are unchanged and remain pending in the application. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the remarks contained herein.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 3-8, 10-14, 16, and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kimata (CIT 2004, IEEE; "Kimata") in view of Puri (Signal Processing Image Communication 2, 1990, pp. 127-144; "Puri"). This rejection is respectfully traversed.

Claims 2 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kimata in view of Puri, and further in view of Eifrig (U.S. Pat. No. 5,991,447; "Eifrig"). This rejection is respectfully traversed.

The CMCI (conditional motion-compensated interpolation) disclosed in Chapter 4.1 of the Puri reference is used in encoding of frames which are temporally separated from each other, and an intermediate (i.e., skipped) frame is encoded using CMCI. Generally, Chapter 4.1 discloses the following contents (which are not direct recitations):

(i) The interpolated frame is likely to have regions with prominent errors due to uncovered backgrounds and because a motion-field used for generating the skipped frame usually contains inaccuracies in describing the movement of objects. It therefore seems reasonable to provide some additional information to the decoder about the frame being interpolated.

(ii) However, the advantage of motion-compensated interpolation is lost if the amount of the additional information approaches the amount of information sent for MCPE (motion-compensated prediction error). Therefore, it is preferable to keep the additional information as small as possible, and to send it only where it is really necessary.

(iii) The MCIE (motion-compensated interpolation error) is coded where it is significant. The MCIE and MCPE are coded independently.

The Examiner states in the Office Action that "output bit stream is determined by whether prediction error is encoded or not". However, the disclosure of Puri cited above indicates that the target for determination whether or not it is to be encoded is not the MCPE (motion-compensated prediction error), but the MCIE (motion-compensated interpolation error) denoted the additional information. This MCIE is encoded only when it is significant. Therefore, the feature that "the target for determination whether or not it is encoded is each GOP in an input image, and the determination is performed by determining whether or not the image belonging to the relevant GOP can be generated on the decoding side without using encoded data of the image" as claimed in the present invention is not disclosed or suggested in either Puri or the Kimata reference.

In accordance with the present invention having the above-described feature, it is possible to efficiently determine during the encoding whether the relevant image can be generated on the decoding (image reproduction) side, and data (information) for indicating whether or not the relevant image is to be generated can be encoded. Therefore, the image encoding side can reliably control whether a video image is not to be encoded, thereby improving the encoding efficiency. Accordingly, it is possible to

provide a video encoding and decoding technique preferably applicable to a video technique for changing the viewing position or direction.

Puri and Kimata, either alone or in combination, are unable to provide such effects, and thus the present invention has an inventive step. Therefore, it is respectfully submitted that the pending claims define patentable subject matter over the applied combination of references. Accordingly, Applicant respectfully requests reconsideration and withdrawal of this rejection.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this response is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: December 30, 2010

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